



- [TPS Home](#)
- [Contact Us](#)
- [Products](#)
- [Distributors](#)
- [Brochures](#)
- [Prices](#)

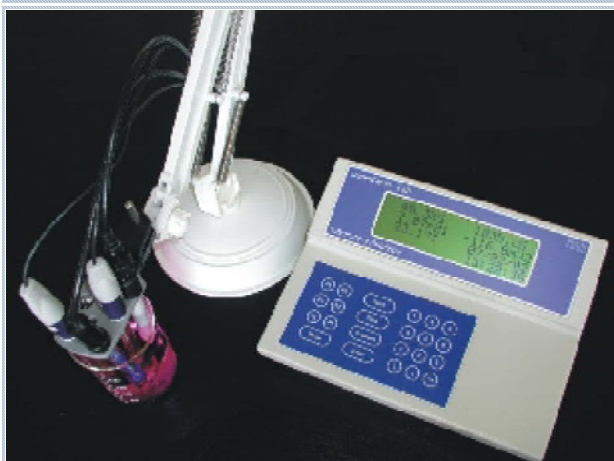
smartCHEM-DO2



请使用翻译作用于这页底部以翻译页对汉语。

TPS Australia - Quality hand-made instruments since 1968.

smartCHEM-D Laboratory Dissolved Oxygen - Conductivity - TDS - Temperature Meter



(smartCHEM-Lab shown)

[Full Size Image](#)

Simultaneous display of...

- ◆ Dissolved Oxygen***
- ◆ Conductivity / TDS***
- ◆ Temperature***
- ◆ Date & Time***

Automatic Stability Function

PIN Code Access

Programmable "Calibration Due" Alarm

240 x 64 dot graphic display with large digits, full text messages and backlight

1489 reading memory with Automatic Datalogging

RS232 serial port interface

Automatic calibration

Readout of probe condition for instant troubleshooting

Fully waterproof design

The smartCHEM-D is a high

PIN Code Access

The **smartCHEM-D** is a high performance, research grade Dissolved Oxygen meter. Salinity levels affect the solubility of Oxygen, so the **smartCHEM-D** also contains a full function Conductivity meter.

Datalogging

The **smartCHEM-D** comes with a 1489 reading memory. Readings can be recorded manually, or automatically logged at preset intervals.

RS232 Serial Port Interface

The capabilities of the **smartCHEM-D** have been expanded with the RS232 port, which is standard equipment (cable sold separately). All readings stored in memory can be downloaded to an RS232 printer or PC. The RS232 port also allows the **smartCHEM-D** to log directly to the printer or PC. WinTPS Communication software for Windows 3.1 or 95, 98 & ME is available.

Automatic Stability Function (ASF)

ASF adds an extra level of versatility to the **smartCHEM-D**. When ASF is activated, the **smartCHEM-D** monitors all parameters that are currently in use. When ALL parameters become stable, the readings are frozen on the display. ASF is automatically activated with extra fine settings during calibration, to ensure the most accurate possible results for the user.

ASF can also be used during Manual and Automatic Datalogging. When used during Automatic Datalogging, the **smartCHEM-D** will log until a stable end-point is reached for all parameters, then stop logging.

Good Laboratory Practices

To comply with GLP guidelines, the date, time and results of the last calibration are stored in memory, along

PIV Code Access

The Access Code system is provided for those users who need to ensure the integrity of recorded data, calibration settings and so forth. The Access Code function will prevent anyone who does not know the code from entering the menu system. Keys that are available during normal measurement, (Store, Print, Autolog and F1 to F5) are still available without the Access Code. This means that others are still able to carry out day-to-day work.

Easy to use

The **smartCHEM-D** has a 240 x 64 dot graphic display. It features a user-friendly menu system, making the handbook virtually unnecessary. Full-text help and error messages are provided. All readings and messages are provided in large, bold characters.

Automatic Calibration

For Dissolved Oxygen calibration, the **smartCHEM-D** automatically detects whether the sensor is in a Zero DO₂ solution or in air and calibrates itself accordingly. A ppm value can also be typed in in ppm mode, if the operator wishes to calibrate against a Winkler titration.

For Conductivity and TDS calibration, the user is able to define the standards to be used for calibration.

Dissolved Oxygen Stirrer Output

A 4.5V DC output is provided for use with the YSI Self-Stirring BOD electrode. The output can be activated as required by the user, or automatically during Automatic Datalogging.

Reliability and Service

The **smartCHEM-LAB** is fully waterproof to IP65, so it is suitable for even the harshest laboratory or factory environments.

Calibrations are stored in memory, along with the instrument's serial number. This data can be displayed or sent to the RS232 port. All readings stored in memory are stamped with the date and time. Warning of failed calibration is provided.

A calibration alarm can be programmed to whichever parameters the user chooses. The alarm can be set for Daily, Weekly, 2 Weekly or 4 Weekly. The calibration alarm can also be switched off.

laboratory or factory environments.

TPS has been manufacturing top quality, reliable instruments and electrodes since 1968. The TPS Quality System has been certified in accordance with the AS/NZS ISO 9001 standard. Our service is also of the highest standard. Spares and accessories are always held in stock, and our modern service facilities ensure a rapid turn-around for maintenance and repair work.

Specifications

Dissolved Oxygen

Ranges

ED1	:	0.00 to 20.00 ppM
		20.0 to 40.0 ppM
		0.0 to 250.0 % Sat'n
		250 to 450 % Sat'n
		0.0 to 50.0 % Gaseous
		50 to 100 % Gaseous
YSI	:	0.00 to 25.00 ppM
		25.0 to 40.0 ppM
		0.0 to 300.0 % Sat'n
		300 to 450 % Sat'n
		0.0 to 60.0 % Gaseous
		60 to 100 % Gaseous
Resolution	:	0.01 & 1 ppM
		0.1 & 1 % Saturation
		0.1 & 1 % Gaseous
Accuracy	:	+/-0.2 % of full scale of
		selected ppM range
		+/-0.3 % Saturation
		+/-0.1 % Gaseous

Conductivity

Memory

1489 readings including date and time.

Automatic Datalogging

User-set for one reading every 2 to 90 seconds, minutes or hours.

RS232 Serial Port Output

1200, 9600, 19200 and 38400 Baud.
8 Bits, No Parity, 1 Stop Bit, XON/XOFF Protocol

Recorder Output (optional)

Max 0 to 2000mV output for any one parameter at one time.
Output impedance approx 1000 Ohms.
Resolution approx 2 mV.

Clock

24 Hour Calendar clock.
Displays date, month, year, hours,

Ranges	Resolution	Accuracy
k=0.1 Sensor		
0 to 2,000 μ S/cm	0.001 μ S/cm	±0.5% of full scale of selected range at 25 °C
0 to 20,00 μ S/cm	0.01 μ S/cm	
0 to 200.0 μ S/cm	0.1 μ S/cm	
0 to 2000 μ S/cm	1 μ S/cm	
k=1.0 Sensor		
0 to 20,00 μ S/cm	0.01 μ S/cm	±0.5% of full scale of selected range at 25 °C
0 to 200.0 μ S/cm	0.1 μ S/cm	
0 to 2000 μ S/cm	1 μ S/cm	
0 to 20.00 mS/cm	0.01 mS/cm	
k=10 Sensor		
0 to 200.0 μ S/cm	0.1 μ S/cm	±0.5% of full scale of selected range at 25 °C
0 to 2000 μ S/cm	1 μ S/cm	
0 to 20.00 mS/cm	0.01 mS/cm	
0 to 200.0 mS/cm	0.1 mS/cm	

TDS

Ranges	Resolution	Accuracy
k=0.1 Sensor		
0 to 1,000 μ pV	0.001 μ pM	±0.5% of full scale of selected range at 25 °C
0 to 10,00 μ pV	0.01 μ pM	
0 to 100.0 μ pV	0.1 μ pM	
0 to 1000 μ pM	1 μ pV	
k=1.0 Sensor		
0 to 10,00 μ pV	0.01 μ pM	±0.5% of full scale of selected range at 25 °C
0 to 100.0 μ pV	0.1 μ pM	
0 to 1000 μ pM	1 μ pV	
0 to 10.00 μ pK	0.01 μ pK	
k=10 Sensor		
0 to 100.0 μ pV	0.1 μ pM	±0.5% of full scale of selected range at 25 °C
0 to 1000 μ pM	1 μ pV	
0 to 10.00 μ pK	0.01 μ pK	
0 to 100.0 μ pK	0.1 μ pK	

Note

Dissolved Oxygen, Conductivity, and TDS ranges are automatically selected. Exact auto-range points are subject to sensor performance.

Temperature

Range : -10.0 to 120.0 °C
(sensor limit 45 °C)
Resolution : 0.1 °C
Accuracy : +/-0.2 °C

Temperature Compensation

0 to 100 °C, automatic or manual.

Calibration

Automatic calibration for all parameters.
User can define standards where applicable.

minutes, seconds.

Good Laboratory Practices

Date, time and value of last successful calibration for each parameter are stored. This information can be recalled or sent to the RS232 port at any time.

Calibration Alarm

Calibration Alarm can be activated for parameter of user's choice. Calibration Alarm can be set to Daily, Weekly, 2 Weekly or 4 Weekly.

Display

240 x 64 dot graphic LCD with large, bold digits, user-friendly menu system and full-text help and error messages.

Enclosure

Tough, high impact ABS. Splash resistant one-piece lid.

Dimensions

240 x 180 x 105 mm

Mass

Instrument only : Approx 1.0 kg
Full Kit : Approx 4.0 kg

Environment

Temperature : 5 to 45 °C
Humidity : 0 to 90% R.H.

Power

12V DC via AC/DC adaptor.
AC/DC adaptor to suit specified country is supplied.

Ordering Information

Part No
smartCHEM-D Meter.....123104

Part No
Options and Accessories

Kit Includes

DO2 Sensor - ED1 (no cable)...123400
1m cable for Sensor (ED1)....123228
Sensor Guard (ED1).....123202
Membrane & filling sol'n kit..123301
Temperature/ATC Sensor.....121248
k=1/Cond-TDS-ATC Sensor.....122230
2.76mS/cm Standard, 200mL....122306
2.00ppK Standard, 200mL.....122307
Manual.....130050

Optional Sensors

YSI DO2 Field Sensor:

DO2 Sensor YSI5739 (no cable).123204
1m cable for Sensor (YSI5739).123212
Membrane & filling sol'n kit..123300

BOD Sensors:

YSI non-stirring BOD Sensor...123214
(1.5m cable)
YSI self-stirring BOD Sensor..123213
(1.5m cable)

Dissolved Oxygen Sensor Maintenance:

ED1 Sensor

Membrane & filling sol'n kit....123301
Filling Solution only, 45mL....123303
Zero calibration Sodium Sulphite123302
BOD Bottle Adaptor (ED1).....123201

YSI5739 Field Sensor & Non Stir BOD

Membrane & filling sol'n kit....123300
Filling Solution only, 45mL....123303
Zero calibration Sodium Sulphite123302
Rejuvenation kit.....123037
Diaphragm replacement kit.....123304
(123304 for YSI5739 Sensor Only)

YSI Self-Stirring BOD Sensor

Membrane Cap Kit.....123308

Computer Interface:

RS232 Serial Port & cable.....130039
Serial to USB adaptor cable.....130087
WinTPS Software for Windows.....130086

Computer Interface:

Recorder Output & cable.....130028

Sensor Holder:

Flexible Sensor Holder.....130088

Same Price Interchange Option:

**Choose between $k=0.1$, $k=1$ and $k=10$
Range Conductivity Sensors**

k=10 Conductivity Sensor.....122234
k=0.1 Conductivity Sensor.....122232



[Download this Specification Sheet in PDF format.](#)



[Download the full colour smartCHEM Series Brochure \(1.76 MB PDF\).](#)



[Download the handbook for this instrument.](#)

Hint : Right click on a link, then select "Save Target As..." or "Save Link As..." to save the file to your own computer.

If you do not have Adobe Acrobat in your computer, a free Acrobat Reader can be downloaded by clicking on the following link.



smartCHEM-DO2

Copyright © 2002 T.P.S. Pty Ltd

Aqua-DO2

Aqua-DY

WP-82

WP-82Y

90-D

smartCHEM-DO2

microCHEM-DO2

miniCHEM-DO2

proCHEM-D

Web Author : TPS Pty Ltd
Copyright © 2002-2004, T.P.S. Pty Ltd
A.B.N. 30 009 773 371
Last modified: January 23, 2009